

RECEIVED
CENTRAL FAX CENTER

APR 26 2007

Amendments to the Claims:

This listing of claims reflects all claim amendments and replaces all prior versions, and listings, of claims in the application. Material to be inserted is in **bold and underline**, and material to be deleted is in ~~strikeout~~ and/or in [[double brackets]] if the deletion would be difficult to see.

LISTING OF CLAIMS:

1. (Currently amended) A system for an engine having at least a first and second cylinder, the cylinders each having at least an intake and an exhaust valve, the system comprising:

a controller configured to:

operate the engine in a first mode where at least both the first cylinder and second cylinder open and close at least both their respective intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products;

operate the engine in a second mode where at least one of the first cylinder and second cylinder opens and closes its intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products, and the other of said first and second cylinders opens and closes at least one of its intake or exhaust valves while maintaining at least the other of its intake or exhaust valves closed during a cycle of the engine;

operate the engine in a third mode where one of said first and second cylinders operates with at least both intake and exhaust valves closed during a cycle of the engine; and

selecting at least one of said first, second and third modes based on an operating condition, **where said second mode is selected at a lower engine speed than said third mode for at least one condition.**

2. (Original) The system recited in claim 1, wherein said fuel is injected directly into the engine cylinder.

3. (Original) The system recited in claim 1, wherein said fuel is injected indirectly into an intake port of the engine.

4. (Original) The system recited in claim 1, wherein said control is further configured to provide a fourth mode where at least both the first cylinder and second cylinder open and close at least both their respective intake and exhaust valves to induct air, without injected fuel.

5. (Original) The system recited in claim 1, wherein said controller is further configured to select from said first, second and third modes based on an engine operating condition.

6. (Original) The system recited in claim 1, wherein said controller is further configured, during said third mode, to operate the other of said cylinders to open and close at least both its respective intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products.

7. (Original) The system recited in claim 1, wherein said operating condition is an engine operating condition.

8. (Cancelled)

9. (Original) The method recited in claim 7, wherein said engine operating condition is an engine load.

10. (Original) The system recited in claim 1, wherein said controller is further configured to stop fuel injection to deactivated cylinders.

11. (Original) The system recited in claim 1, wherein said controller is further configured to adjust valve opening and closing times in said second mode

of said group opening its exhaust valve while maintaining at least its intake closed, wherein said adjusting is based on engine load and speed.

12. (Original) The system recited in claim 1, wherein said controller is further configured to maintain pressure in deactivated cylinders above crank case pressure to reduce oil consumption during selected conditions.

13. (Original) The system recited in claim 1, wherein during said second mode, the other of said first and second cylinders opens and closes at least an exhaust valve while maintaining at least an intake valve closed.

14. (Original) The system recited in claim 1, wherein during said second mode, the other of said first and second cylinders opens and closes at least an intake valve while maintaining at least an exhaust valve closed.

15. (Currently amended) A system for an engine having at least a first and second cylinder, the cylinders each having at least an intake and an exhaust valve, the system comprising:

a controller configured to:

operate the engine in a first mode where at least both the first cylinder and second cylinder open and close at least both their respective intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products;

operate the engine in a second mode where at least one of the first cylinder and second cylinder opens and closes its intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products, and the other of said first and second cylinders opens and closes at least its exhaust valve while maintaining at least its intake valve closed during a cycle of the engine;

operate the engine in a third mode where one of said first and second cylinders operates with at least both intake and exhaust valves closed during a cycle of the engine; and

selecting at least one of said first, second and third modes based on engine speed, where said second mode is selected at lower engine speeds than said third mode~~an engine operating condition.~~

16. (Original) The system recited in claim 14, wherein said fuel is injected directly into the engine cylinder.

17. (Original) The system recited in claim 14, wherein said fuel is injected indirectly into an intake port of the engine.

18. (Original) The system recited in claim 14, wherein said control is further configured to provide a fourth mode where at least both the first cylinder and second cylinder open and close at least both their respective intake and exhaust valves to induct air, without injected fuel.

19. (Currently amended) The system recited in claim 14, wherein said controller is further configured to select from said first, second and third modes based on engine load~~an engine operating condition.~~

20. (Original) The system recited in claim 14, wherein said controller is further configured, during said third mode, to operate the other of said cylinders to open and close at least both its respective intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products.

21-23. (Cancelled)

24. (Original) The system recited in claim 14, wherein said controller is further configured to stop fuel injection to deactivated cylinders.

25. (Original) The system recited in claim 14, wherein said controller is further configured to adjust valve opening and closing times in said second mode of said group opening its exhaust valve while maintaining at least its intake closed, wherein said adjusting is based on engine load.

26. (Original) The system recited in claim 14, wherein said controller is further configured to maintain pressure in deactivated cylinders above crank case pressure to reduce oil consumption during selected conditions.

27. (Currently amended) A system for an engine having at least a first and second cylinder, the cylinders each having at least an intake and an exhaust valve, the system comprising:

a controller configured to:

operate the engine in a first mode where at least both the first cylinder and second cylinder open and close at least both their respective intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products;

operate the engine in a second mode where at least one of the first cylinder and second cylinder opens and closes its intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products, and the other of said first and second cylinders opens and closes at least one of its intake or exhaust valves while maintaining at least the other of its intake or exhaust valves closed during a cycle of the engine;

operate the engine in a third mode where at least both the first cylinder and second cylinder are operated without injected fuel; and

selecting at least one of said first, second and third modes based on engine speed, where for at least an operating condition, said third mode is selected at a higher engine speed than said second mode.

28. (Previously presented) The system of claim 27 wherein during said second mode, the other of said first and second cylinders operates without fuel injection.